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W A S H I N G T O N, D. C.





AN  
INAUGURAL DISSERTATION  
ON  
CHRONIC PNEUMONY,  
OR  
Pulmonary Consumption:  
SUBMITTED TO  
THE EXAMINATION  
OF THE  
REV. JOHN EWING, S. T. P. PROVOST;  
THE  
TRUSTEES & MEDICAL FACULTY,

OF THE  
UNIVERSITY OF PENNSYLVANIA,

On the sixth Day of June, 1799,

FOR THE DEGREE OF  
DOCTOR OF MEDICINE.

BY JOHN SKOTTOWE BELLINGER,  
OF CHARLESTON, SOUTH CAROLINA.

MEMBER OF THE PHILADELPHIA MEDICAL AND CHEMICAL SOCIETIES.

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TO  
BENJAMIN RUSH, M. D.

PROFESSOR OF THE INSTITUTES AND OF CLINICAL MEDICINE,  
IN THE  
UNIVERSITY OF PENNSYLVANIA.

MUCH RESPECTED SIR,

*HAVING enjoyed, for nearly four years, those great advantages inseparably connected with being your pupil, it would be a dereliction of that gratitude so much your due, did I refrain from expressing my acknowledgments upon the present occasion.*

*I beg you, therefore, to consider this essay as a tribute of gratitude; and to receive the warmest wishes for your health, happiness, and long continued success in the science of medicine, of*

*Your greatly indebted  
Pupil and Friend,  
J. S. BELLINGER.*



TO

PIERCE BUTLER, Esq.

DEAR SIR,

*PERMIT me thus publicly to acknowledge my obligations to you for the friendship and polite attention I have received from yourself and amiable family, during my residence in Philadelphia ; and at the same time to express the great respect I have always entertained for your public and private character.*

*With sentiments of high esteem,  
I remain your much obliged,  
And grateful Friend,  
J. S. BELLINGER.*



## INAUGURAL DISSERTATION, &amp;c.

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THE subject which I have chosen for the following dissertation, is Chronic Pneumony, or Pulmonary Consumption. This disease usually commences with the symptoms of a common cold, slight stitches in the sides and breast, some degree of fever, pain in the head, back, joints, and limbs. To these may be added a difficulty of breathing, and slight cough,\* troublesome only at night. The above symptoms are frequently so slight, as to give no indication of danger to the patient; from which cause they are seldom attended to, and soon become aggravated—the cough becomes more apparent, and somewhat distressing, and is, as yet, not accom-

\* Cough, though a very general, is, by no means, a necessary consequence of a pulmonary disease. Dr. Russ takes notice of this, and gives the history and the appearances on dissection of a young lady who died of this disease without the above symptom. Bonetus in his *Sepulcretum* has also the dissection of a woman, in whom a large schirrus of the size of an egg was found in the right lobe of the lungs: this patient had laboured long under a fever; but had never had a cough.

panied with any discharge ; the nights are passed in a more restless manner ;—pains more acute and fixed are now felt in the thorax ; respiration hurried and performed with more difficulty—some frothy mucus is now expectorated, small in quantity, tough, and ropy, with much difficulty, which sensibly relieves the oppression for a short period. The pulse is generally, at this period of the disease, hard and full ; but sometimes quick and irregular.

At the first appearance of the above symptoms, the tongue is white and the countenance pale,—appetite impaired, and the stomach weak, often rejecting food. This disposition to vomit, when accompanied with a cough, *Morton* considers as a certain Pathognomonic symptom of a pulmonary affection. While phthisis is in this simple state, the patient goes about and imagines no dangerous consequences will ensue from these seemingly trifling symptoms. This state of things often remains stationary for weeks, though not unfrequently the fever soon increases, and an exacerbation takes place in the afternoon of every day. All the other symptoms are now increased, and perspiration breaks out, in the morning, upon the upper part of the body, but, more particularly, on the breast and forehead. When this takes place a remission of all the feverish symptoms soon ensues, and continues throughout the fore part of the day. The cough,

which has been gradually increasing, in violence and frequency, is aggravated by a recumbent posture of the body—prevents sleep and distresses the patient, till the discharge of the morning sweat takes place, to his great joy: as he now feels that repose and ease which had been long wished for in vain. The matter of expectoration is frequently streaked with blood; and daily increases in quantity. When the exacerbation of fever is at its height, a redness of the cheeks, lips, and tongue, is perceived.—The fever is heightened after eating, more particularly, of solids; and, after much exercise, flushings of the face and a sensation of heat in the hands and feet, are experienced. As the disease advances, the fever is more fixed, and the remission more perceptible. It begins about noon, continues to increase till evening, and lasts the greater part of the night, when the patient is again relieved by the discharge of sweat. But it occasionally occurs, that this paroxysm of fever remits early in the afternoon, and after this, a second exacerbation ensues, which is also relieved by the discharge of perspiration. This second paroxysm, however, appears to be an adventitious occurrence, produced by occasional circumstances.

After such restless nights, the patient, as might be expected, is weak, languid, and not at all refreshed by the little sleep, which he usually enjoys towards

morning. The pulse is quicker than when in health; yet, it can easily be perceived, that a remission has taken place, as well from the state of his pulse, as his own sensations. The expectoration, which has hitherto been small in quantity, is now much increased, and in the morning is combined with *pus*, in round masses, sometimes disagreeable to the taste, of a yellow, greenish, and, as the disease advances, of a dirty brown colour. The pain in the breast generally abates in violence as the expectoration becomes thinner: for, from this circumstance, the lungs are less agitated, although the cough be less frequent. The quantity of urine is more diminished than when in health, is high coloured and deposits a brown or white sediment.

The disease appears to be now confirmed: tho' the matter coughed up be small in quantity. From a continuance of the above symptoms, and from their increase, in violence, the body gives striking proofs of decay: the fat, which, in health, fills the sockets of the eyes, now disappears, and they sink, become weak, dull and languid—the cheeks are high and prominent—the flesh wastes gradually away from every part of the body—the nose appears thin and sharp—the temples are depressed, and the strength daily fails.

The pulse in phthisis is sometimes *Synoca*, *Synocus*,

*Synocula, Hectic, and Typhus.\** The two last states of the pulse, do not always occur in the last stage of this disease. The appetite, from the very commencement of consumption, is less impaired than we would expect, and often continues good until the near approach of dissolution: it is even frequently very keen, and, as this is a favourable occurrence in most diseases of long continuance, we must be careful in not being deceived by it, and hastily prognosticate returning health. I have observed one or two instances, in which phthisical patients appeared to have no desire for food; but, within a few days of their death, their appetites became excessive, and continued in this morbid state, until that event took place. Costiveness is usually a constant symptom of consumption in its beginning, particularly, after the morning perspiration commences. From the febrile symptoms being increased towards the afternoon, and the expectoration less in quantity, the patient is afflicted with an intolerable anxiety at the breast, which is aggravated by the obstructed vessels of the lungs, resisting the passage of the increased circulation of blood

\* A *Synoca* pulse is seldom very quick, but full and hard. A *Synocus* is quick and full but not hard. *Synocula*, is quick and tense attended with a jerk and small volume. The *Hectic* is full, frequent, and sometimes hard; and the *Typhus* is weak, quick and irregular without hardness.

through them. We cannot be surprised at this occurring to so great a degree in this state in the above viscus, since we perceive the same effect ensue even in the sound state of the lungs, from an increased circulation, by any cause, either of exercise or of fever.

About this period of the disease in the *fair sex*, the menstrual discharge usually ceases:—it however sometimes occurs at an earlier period; and, whenever this cessation takes place, it never fails of cherishing that delusive hope, which seems to be almost peculiar to this disease; and which often continues, to within a few days of death. The above occurrence uniformly appears to be convincing to the minds of the patients and their friends, as the sole cause of all the symptoms that ensue after its cessation. But although the menstrual flux usually ceases in a short time after the attack of phthisis; yet, there are cases on record, in which it has occurred at its stated periods, and continued regular during the whole continuance of a lingering disease.

When the suppression of the menses ensues, practitioners ought to be careful lest they be also deceived; and by directing their whole attention to this *one* symptom, thus lose the best and perhaps the only opportunity, they may possess, of affording the unfortunate patient a chance of recovery.

A diarrhea is usually, though not certainly, one of the last symptoms of the disease ; but we sometimes meet with a few cases of phthisis in which this symptom never occurs. A purging however not unfrequently appears in an early stage. When diarrhea takes place, patients are relieved from that anxiety and oppression, which had hitherto distressed them ; and the pyrexia, burning at the breast, and sweating at night, abate. As the purging increases, the fever and expectoration diminish, the strength rapidly declines ; so that they are scarcely able to move without much fatigue. When phthisis is far advanced, patients can scarcely articulate their words : in attempting which, pain is produced and a disposition to cough ensues. This is attended with a remarkably hollow sound very distressing to a bystander. Even in this stage of things, the poor patient still flatters himself with the idea of a recovery, particularly if the desire for food be present ; which is unfortunately too often the case. The memory is so much diseased that patients seldom recollect the occurrences of the preceding day :— and I have observed, in two cases, the sense of hearing to be much impaired. In the above patients I could not attribute the deafness to any other cause than the disease. They both died.

In the close of consumption frequent convulsions and dyspnœa take place : the cough and also the

expectoration greatly diminish, owing to the inability of the patient in making the exertion necessary to the discharge of the latter: as the pus sticks in the trachia, the difficulty of respiration is increased and sometimes this function is suspended. Matter is occasionally expectorated with little or no exertion or coughing. In some cases, an acute pain in the breast, which is increased by the cough, or a tension or pain when patients lie upon the right or left side, produces a quick, hurried, and distressing respiration, and even stops it for a time. This is also produced by tubercles pressing upon the unobstructed bronchial vessels. If, from either accident or design, the diarrhea be stopped in any period of consumption, the fever, anxiety and distress of the patient are greatly increased. I once saw this circumstance occur in a young man three or four days before his death, and he continued costive until that event took place, though laxative medicines were administered. The great disposition to sweat, which having once taken place, is a constant symptom, is diminished and sometimes ceases, towards the close of the disease. When consumption is far advanced, the patient lies on his back, with his head and shoulders raised high by pillows; but in an earlier stage, his posture is in most instances on the affected side. The evacuations by stool, are extremely fetid, and are said to be often white, but this appearance I have never seen. The breath

generally becomes very disagreeable, more particularly when death is near at hand.

Together with the preceding symptoms, the legs, feet, and hands occasionally swell; and the patient being now weak, low and emaciated, has a frequent, distressing hiccough, profuse sweats, foul tongue, low voice, and convulsions—and death soon closes the scene in some cases: while in others, the wretched patient continues his miserable existence for weeks. Hippocrates says that a falling off of the hair is a symptom of impending death. This symptom is by no means constant, for it does not always occur even in slow consumptions. The disease of which we are treating often makes a more rapid progress. In these cases the symptoms are increased in force, follow each other in quicker succession; and, in proportion to their violence, death takes place in a few weeks, months, or as many years. We see cases recorded in almost every writer upon this disease, in proof of its continuing many years; and Dr. Rush, in his lectures, quotes a case of phthisis, which began at the 17th year of age and continued to the 70th. This diversity, as to the duration of phthisis, appears to depend upon the habit and mode of life of the patient, the season of the year, and also the climate in which the attack is made, and some other occasional circumstances.

When patients are destroyed after a short illness, by this complaint, it is denominated a *galloping consumption*.

It is usual for consumption to make very considerable progress, in the female sex, previous to its being attended to: from this circumstance alone, should they not be regarded with the greatest circumspection, upon the slightest appearance of its symptoms, lest, through neglect, the disease be permitted to take so strong a hold of the constitution, as to render all exertions fruitless? When pregnancy takes place, in any stage of phthisis, a suspension of all the symptoms most usually ensues. This flattering deception continues until delivery, when they return, for the most part, in a violent manner, and soon prove fatal. From consumption almost uniformly being arrested, in its progress, by conception, this circumstance has attracted the notice of many authors; and as it is the foundation of the ingenious theory of an eminent writer, will be considered in a more proper place. I must not omit mentioning, however, that this state of the system is not the only occurrence that suspends the progress of this dreadful disease. It alternates "with mania, diarrhea dysentery, dyspepsia, and rheumatism."\* Mania seizing the patient has frequently

protracted the death of consumptive persons, even when far advanced in the disease. Dr. Mead relates the following case of a young lady, who, after having been troubled with a violent cough and spitting of blood, for two months, was attacked with a hectic, attended with thirst, heat and night sweats, together with great wasting of flesh, and frequent spitting of tough slime from the lungs and throat, interspersed here and there with small portions of yellow purulent matter. From a certain cause she was now seized with religious madness; from which time the symptoms of the original disease began to abate: the febrile heat decreased, the spitting stopped, the sweats diminished, and the bodily strength seemed to become more adequate to performing the functions of life, in proportion as the mind grew less capable of governing the body. In a few days, she became melancholy, and about the end of the third month, the hectic and ulceration returning, she finally died.

The above is the usual termination of such cases; but occasionally phthisis is perfectly cured. Dr. Cullen expressly remarks that a mania has sometimes entirely cured this disease. Dr. Rush in his 2d vol. informs us, that three clinical patients, in the Pennsylvania Hospital, in the winter of 1772, were relieved *several times* of a cough by pains in their limbs; and, as often, the pains in their limbs seem-

ed for a while to promise a cure to their pulmonic complaints. Many consumptive persons were relieved, and some recovered, according to Dr. *Blane*, in consequence of the terror excited by the hurricane, which took place at *Barbadoes* in 1780. Dr. *Bennet*, in his treatise on the nature and cure of consumptions, mentions the case of a phthisical patient, who was attacked with a violent pain in the teeth for two days, and in whom, during that time, every symptom of consumption, except the leanness of the body, altogether vanished. The same author adds also, that a defluxion on the lungs, had often been relieved by salivary evacuations.

Dr. *Thunburg*, in his travels, after relating the accident which happened on board his vessel, from a quantity of white lead having been used in frying some pancakes, informs us, that the captain suffered much from a colic, which continued violent for two days: the Doctor then observes, “ he was of a consumptive habit, and his cough kept away for *several* days in consequence of this accident.”

Persons of tender, weak and delicate constitutions, particularly those possessing narrow and flat chests, prominent shoulders, and long necks, are most usually the subjects of phthisis. Those persons constantly occupied in certain manufactories

are often afflicted with this disease. Dr. *Kirkland* observes, " that scythe-grinders are subject to a disease of the lungs, from the particles of sand mixing with iron-dust, which among themselves, they call the *grinders' rot*." It is said that persons of a delicate, thin and fair complexion, and those who have grown rapidly, are most liable to this disease. Many authors suppose, that white and transparent teeth, are characteristics of a predisposition to pulmonary consumption. Dr. *Simmons* asserts, that the greater number of those who are carried off by this complaint, will be found never to have had a carious tooth. From the small experience I have had, it is impossible to give an opinion; but it is certain, many are afflicted with this disease who have bad teeth.

**Females** are oftener attacked with phthisis than males. This appears to arise, in part, from their more sedentary lives, the structure of their bodies, and also, from their thorax being more confined by their manner of dress. From the last cause, the ribs must be depressed, the thorax straitened, the abdomen compressed, the action of the diaphragm greatly impeded, and thus such a formation of body is often induced, as to indicate a disposition to diseases of the breast. It is to the above cause, *Spi-gelius* ascribes the frequency of phthisis in England: he remarks, that, " that solicitude which young

women shew to make themselves appear *taper-shaped* is absurd and incredibly pernicious ; for whilst, by stays, and other hurtful contrivances, they straiten their chests, they do not consider that they are preparing the way for consumptions, and decays." This complaint occurs in persons of every age, even from infancy to an advanced period of life ; but from puberty to about thirty-six, at which time the human body has attained its *acme*, it makes its greatest ravages. The Indians are believed to be exempted from this disease. But, as in many books consumption of the lungs is enumerated among their common diseases, I was desirous to obtain more accurate information upon the subject. Accordingly I made application to Dr. *Barton*, who, from his attention to the *natural history* of these people, I expected could satisfy me upon this point. In a conversation I lately had with the Doctor, he informed me, that the Indians were often afflicted with consumption ; and that he had seen cases of it in his travels among them in the state of *New York*. The Doctor added, also, that he had proofs of phthisis being among the Indians previous to their much intercourse with the *whites* : although more prevalent with them now than formerly. He then very politely favoured me with the following extract of a letter he had received from Mr. *James Geddes*, a respectable gentleman residing at *Onondago Lake* in the state of *New York*, dated the 16th of No-

vember, 1798. "The Indians here decrease. Three years ago, there were 133, and last *spring* when they received their money, there were but 105. They almost all die of the 'phthisis pulmonalis.'" Dr. *Barton* further remarked, that the above was but one among many facts, in his possession, of the existence of consumption in these people. I must add however that these *Onondago* Indians do not live as they formerly did; which shews, in a conspicuous manner, the influence of certain modes of life upon the human body in producing diseases. Dr. *Rush* observes, "that it is scarcely known by those citizens of the United States, who live in the *first* stage of civilized life, and who have lately obtained the title of the *first settlers*." The inhabitants of large and populous towns are more frequently sufferers by this disease, than those who reside in the country. We may add also, that the Negroes in South Carolina, who pursue an active life, are rarely the victims of consumption.

From the authority of nearly all writers, we may assert phthisis pulmonalis to be an hereditary disease. It has been observed in contradiction to this, that, as by proper precautions, the unfortunate descendant may escape the disease of his ancestors, consumption is not, strictly speaking, an hereditary complaint. But the same objection ap-

plies with equal force to other diseases, which are allowed to be hereditary. Gout may be noticed as an example. Persons who are thus predisposed to phthisis, are remarked to have the symptoms in a slow and gradual manner, and hold out much longer, though death is more frequently the issue, than when the disease occurs without this state of the system.

Consumption is said by many authors to be *contagious*; but although we find cases in proof of this, related by *Van Swieten*, *Darwin* and other writers of the first reputation, I should rather attribute the attack of the disease, to the great want of exercise, and the impure air the persons breathe who attend the sick; and also to a family predisposition, when it occurs in the relations of the deceased. The Baron *Van Swieten* supposes some danger might arise from the breath of the sick, though the spittle be not very fetid: to prove this, he gives us the following extraordinary history. "A man's wife, expiring of a consumption, gave him a farewell kiss. All that part of his chin, which her lips had touched, remained ever after *smooth*, although the beard grew thick all around." Phthisical persons are sensibly affected by every change of the weather, particularly a sudden transition from heat to cold. It is observed that the air on sea shores, is detrimental to those afflicted with this disease; but when at sea they are much

benefited. In this case, the effects produced seem to arise from the mixture of the sea and land atmosphere.

The matter spit up, in pulmonary complaints, varies in all respects, according to the period of the disease; and as by some it is supposed that, from an attentive examination of it, we may draw indications, from its appearance, of the effects of the *mode* of cure, which has been pursued, we may, to satisfy the patient and his friends, daily examine the expectoration. At the commencement of phthisis, the matter of expectoration consists of only *mucus*, from the trachea, containing much *air*, which may be rendered sensible by placing it in an inverted glass, full of water. After some time the mucus being dissolved, the air is seen rising in small bubbles to the surface of the water. At a certain period of the disease, various in different patients, *pus* appears in the matter coughed up. This increases daily in quantity, is of a brown, dirty colour, tinged green or with blood, of a globular form, often fœtid, and sometimes sweet to the taste.

We will now mention some of the tests to distinguish these two fluids from each other; though I must confess, the knowledge we may possess, relative to this criterion, appears to be no great acqui-

sition in the cure of the complaint. Pus, when agitated in water, is soon mixed with it, and on remaining at rest, for some hours, a precipitate will take place. But no precipitate ensues from the union of water and mucus, which is more difficultly effected than that of pus and water. When pus is put into water it sinks; but mucus swims on its surface. From these circumstances, however, no inferences should be immediately made of the matter spit up, being either pus or mucus, because the former sometimes sinks and the latter often swims: —the one, occasioned by its being expectorated in lumps—the other, from its containing air or being greatly blended with mucus. As the above is not unfrequently the case, we should not form an opinion until the matter be agitated some time.

The following experiments are considered to be more conclusive. Let the expectorated matter be dissolved in sulphuric acid, or a solution of caustic alkali, then add pure water. If there be a fair precipitation in each solution, it is certain that some *pus* is present. But if this does not occur, it is a sure test that the matter is entirely mucus. If the matter cannot be made to dissolve in the alkaline lixivium there is also reason to believe that it is *pus*. I have often tried the above modes of discovering the nature of the expectoration of persons labouring under consumption, but with so little variation

from the above, which I have collected from authors, that it is unnecessary to particularise them. It is proper to examine what is expectorated during the night and morning only, and that also which is brought up by a slight cough without much straining. This is necessary even in the advanced stage of phthisis, as, during the day, when the patient has discharged much pus in the night by coughing, he expectorates very little else than mucus.

The late unfortunate and ingenious Dr. Stark supposed, that the spittings of consumptive persons differed both from *mucus* and *pus*. The Doctor found it to be more easily diffusible in water than *mucus*, and at first forming a permanent ropy fluid, but in a few days depositing a sediment in the same manner as *pus* does: the liquor, however, still continuing ropy, resembling *mucus* and water. The above appearance I have never observed, though I particularly attended to it in two patients who were far advanced in the disease. Perhaps Dr. Stark might have been misled by not carefully separating the two fluids from each other, before he made his experiments; for as some *mucus* is almost universally combined with *pus* in the expectoration of patients, this may have been the cause of the apparent difference which he observed. When the expectoration is very foetid, it is supposed, by many authors, to indicate a mortification; but this ap-

pears to be a hasty conclusion, as there are many instances on record, in which persons have lived years while labouring under this symptom, and some have even recovered after this has been the case to a great degree. Van Swieten records the case of a youth who spat much foetid matter in the morning: he had been afflicted with consumption for a long time previous to this foetid matter being discharged, and he lived two years after its appearance.

We will next consider the appearances upon dissection. In the cellular substance of the lungs, are found bodies of a roundish figure, firm consistence, and of various sizes, from half an inch in diameter to the smallest size, that are called *tubercles*. The small ones are always solid. Many of the large tubercles are observed together, often hard, their colour somewhat white, and similar to cartilage. Their surface, when cut through, appears smooth, shining and uniform. In some are observed one or more small holes; but in others small cavities filled with a fluid like pus. At the bottom of these cavities, small holes are often seen, which upon being pressed, discharge matter. These holes do not appear to have communication with any vessels. The cavities of tubercles are, in some, from half to three-fourths of an inch in size; but in others, they are barely perceptible. The larger ones, when cut

and emptied, resemble small white cups, nothing remaining of the substance of the tubercle except a thin covering or capsula. Those cavities smaller than half an inch are always shut; but those larger have a round opening made by a branch of the trachæa. Dr. Stark, from whom this history is taken, could not observe on the cut surface of the small tubercles, either cells, vesicles, or vessels, even when examined with a microscope, after injecting the pulmonary artery and vein. Tubercles are seldom found without adhesions of the lungs to the Pleura. The consistence of the contents of the tubercles, often differs in the same subject: thus, while some contain a fluid, others are filled with a thick substance of the nature of fresh cheese. When there exists an opening from the tubercles into the trachæa, and by this a communication between them and the external air, they have been denominated *vomicæ*; which now come under consideration.

The large *vomicæ* are of an oval form, lined with a smooth and tender membrane, and are most commonly ruptured. When many of these are situated near each other, they form large ulcers. The small *vomicæ*, are not often found ruptured. We find openings to exist between the larger *vomicæ* from one to the other: these canals are irregular and not smooth. Several openings are also perceived into large *vomicæ* by the bronchial ramifica-

tions ; but these are round and smooth. The fluid, found in vomicæ, previous to a rupture, is white and somewhat yellow ; but after this has taken place, it is *red*. If not perfectly broken we find the fluid to be rarely red, but of a yellowish colour, sometimes brown and often foetid. The above fluids are diffusible in water whether the vomicæ be ruptured or not. The situation of large vomicæ is usually in the back parts of the upper lobes, but we find them in all parts of the lungs, although most frequently on their external surface. *Valsalva*, who dissected many consumptive persons, found the ulcer and disease in almost all his cases upon the upper part of the lungs. Those parts of the lungs near the circumference of the vomicæ, are found inflamed, somewhat hard and impervious to air when blown in the trachæa. The contiguous parts of the lungs are often soft, tending to suppuration. Those blood-vessels near the large vomicæ are much contracted in their circumference, and though they may appear as large as those which communicate with parts of the lungs not diseased, yet their diameters are nearly closed with a fibrous substance.

After having injected the arteries and veins of a diseased lung, Dr. Stark, upon cutting into the founder parts, saw numberless ramuli filled with the wax ; but no such appearance could he discover in the diseased portions. The vessels of the trachæa

which open into the *vomicæ* are found in their internal surface to be inclining to red, but of their natural size. The liver has been discovered to be hard and indurated. The pancreas and spleen have been likewise found to be diseased; and the villous coat of the intestines has often, after a long continued purging, exhibited marks of erosion.

In some cases of phthisis, the substance of the lungs have been found nearly all destroyed; and we often see one-half consumed, though in common, about one-third or one-fourth only is destroyed. Dr. *Haller* found, instead of the left lobe of the lungs (which had entirely disappeared) a great quantity of almost foetid water viscid like the white of an egg. In *Bonetus*, we have the case of a woman, in whom both lobes of the lungs were entirely purulent. In the same book is also the dissection of an infant boy, who died of this disease, in whom there was no vestige of the left lung or the pleura; and a large abscess was found in the *mediastinum*. These different appearances, with respect to the quantity of the lungs found diseased, seem to be produced in proportion to the violence of the morbid action, and not to the duration of the disease. In those destroyed by a violent and hasty consumption, the lungs exhibit more evident signs of destruction than in those, whose diseases have been of long duration, and attended with less violent symp-

toms: That a suppuration might take place without consuming the part from whence it arises, appears to have been first noticed by the late Dr. *Hunter*. This sometimes happens in pulmonary consumption. The lungs have been discovered sound, although much pus had been expectorated during life. A remarkable instance of this is recorded by *De Haen* to have taken place in the hospital at Vienna: he found the lungs of a person, who had discharged a very great quantity of pus by spitting, entire. When cut into, not a drop of pus, nor the least marks of a vomicæ were to be discovered. Some pus was in the trachæa. Upon the dissection of a man who had discharged much blood before his death, Dr. *Simson* discovered a schirrus upon the upper part of the right lobe and a sinus filled with pus. The left lobe of the lungs was without hardness, well coloured and appeared sound. He was however much surprised to see *pus* issue from every part of its surface when cut, and this *too*, in different places.

Both lobes of the lungs are sometimes diseased, but most frequently only one. In the opinion of most authors, who have had the greatest opportunities of judging, the *left* lobe is most frequently affected. May not this arise from the left pulmonary artery being *shorter* than the right? And thus, would it not receive a greater impulse in circulation?

No other remarkable appearances are discovered upon dissection, other than that the lymphatic glands of the chest have been found of a dark colour, containing a white substance of the consistence of paste.

We now proceed to the consideration of the *causes* of consumption. The causes of *disease* have been divided into *remote*, *predisposing*, *exciting*, and *proximate*: upon each of which I shall say a few words in their proper order.

The *remote* causes of this disease are such, as by their action upon the whole system, or the lungs particularly, render them more susceptible of the impression of stimuli by inducing *debility*. This is of two species, according as the cause be either stimulating or the reverse. These causes may be divided into *local* and *general*: the former acting upon the lungs *directly*, the latter *indirectly* through the medium of the whole body.

The *local* causes, which I shall first consider, appear to be *hœmoptysis*, wounds of the lungs, or discharges of matter into them, in consequence of other states of disease, bruises and falls injuring the thorax, and the dust discharged in certain manufactures. A spitting of blood is supposed by many to be the most general cause of consumption. The

testimony of many authors of great respectability and daily observation, prove this to be entirely erroneous. Many persons not only have phthisis without this precursor, but numbers have this symptom for years, and who have lived to an advanced age free from consumption. In every medical record, we have examples to prove the above assertions. When it occurs in persons liable to this disease from an hereditary predisposition, or any other state of the system, it is, however, very frequently followed by phthisis. An ill-cured pleurisy or peripneumony is often the cause of consumption. It appears to be natural to suppose that wounds of the lungs would be always succeeded by this disease; but the reverse is usually the case. Mr. *John Hunter*, who certainly possessed a very great opportunity of obtaining accurate information on this subject, from his extensive practice in wounds, in general, in speaking of consumption from wounds of the lungs, observes, "I cannot say I ever saw a case where such an effect took place." All physicians, however, have not been so fortunate as Mr. Hunter, since cases from this cause have occasionally been met with. The principal reasons why we do not more frequently see phthisis induced by the above causes are, 1st, From the persons not being in a state of predisposition; and, 2dly, From the treatment that is usually followed when such accidents occur. I am confident, if an incipient consumption was

always treated in the same manner, it would as certainly be cured.

Persons much exposed to the dust of certain substances, as millers, miners, skin-dressers, and others, are often attacked with phthisis. The workers in mines soon fall victims to their business, partly from being deprived of *pure* air, and the light of the sun; but, more particularly, from the debility that is induced in their lungs. The effluvia which exists in mines of arsenic, act powerfully in inducing a disposition to phthisis. *Chaptal* remarks, that “ this metal which is very frequently met with in mines causes the destruction of a number of workmen who explore them; being very volatile, it forms a dust which affects and destroys the lungs; and the unhappy miners, after a languishing life of a few years, all perish sooner or later.” I am acquainted with a young gentleman of this city who is affected with violent dyspnoea when exposed to the dust which arises from the grinding of rye meal. It produces also repeated *sneezing*, and he is only to be relieved by removing from the cause. Bruises and strains of the thorax, produce a disposition to consumption, more frequently than wounds of the lungs themselves, merely from their being apparently so trivial as to demand very little attention. According to Dr. *Lind*, out of 360 persons whom he attended in phthisis,

it was induced by falls, bruises and strains received a year or two before its appearance, in *one-fourth* of them. Among those causes, which appear to produce a debility in the lungs, through the medium of the general system, we may enumerate the following.

1st, Violent exercise. 2dly, An intemperate mode of life, as hard drinking, great eating, and an excessive indulgence of the venereal appetite. 3dly, Stimulating passions of the mind. 4thly, Heat, suddenly succeeding cold and moist weather. 5thly, A too sedentary life, and a sudden change in the diet from low to high living. 6thly, A sudden diminution or stoppage of any usual evacuation, particularly of blood, as *epistaxis*, *haemorrhois*, *menses*, and the *lochia*. 7thly, A neglect of customary blood-letting, in full habits, and an intemperate use of *tobacco*. To the above, I think, may be added the disappearance of certain *eruptions*, which are often observed upon the *shoulders* and *breasts* of young persons, and also a non-conformity, in the dress, to the changes of the weather.

I now proceed to offer a few remarks upon some of the above causes, that appear to be most frequently succeeded by the effect which is attributed to them. And first of an intemperate life.

The alluring and transitory pleasures of dissipa-

tion, and its concomitants, exclusive of their baneful effects upon the *minds* of its followers, almost certainly produce many fatal diseases of the body; of which consumptions are the most frequent. We meet with cases of phthisis, in many *authors*, that are justly attributed to the above cause; and all practitioners, of even moderate experience, must have observed the same. Late hours, hard drinking, and an excessive exercise of the passions, seldom fail of inducing *that state* of the system, which predisposes to phthisis, *even* in those, whom otherwise we might conclude not liable to its attack. How much more positively, then, will this disease succeed these causes, in persons predisposed to phthisis: and how careful, therefore, should persons so circumstanced be of themselves, from the certainty, that the disease is more readily induced in them than in others?

2dly, Heat, suddenly succeeding cold and moist weather, violent exercise, stimulating passions of the mind, and a sudden transition in diet, from low to generous living, may act as remote causes of consumption in two ways. 1st, By inducing general indirect debility, or 2dly, By propelling so much blood to the lungs as to excite an hemorrhage; thus creating them a *weak* part, and thereby rendering them in future less capable of resisting the renewed action of one or many of the preced-

ing causes. An hamptyfis was brought on a young gentleman about nineteen years of age, of a delicate constitution, from the exercise of riding forty miles in a *stage coach*, upon a warm day in the month of August last.

A sudden cessation of any usual evacuation of blood, and a neglect of periodical blood-letting, are, with great propriety, considered by writers very frequent remote caufes of this disease. When a cessation of any of the sanguinary discharges, which I have mentioned, occur, from accident or by *art*, the person is, in most instances, soon troubled with uneasiness and oppression at the breast, accompanied with quick respiration. In these instances, unless some evacuations are timely used, or the usual *discharge* comes on, he is often attacked with a spitting of blood, or symptoms of phthisis. In persons afflicted with a discharge of blood from the hæmorrhoidal vessels, great caution is requisite in their treatment, lest a complaint of the breast be induced. *Hippocrates*, long ago, said, " that in the cure of *bleeding piles*, of long standing, unless one be left running there is a danger of a dropfy or a phthisis," and the truth of this aphorism has been repeatedly experienced by medical practitioners since his time. It may not be improper, in this place, to insert the following fact. " A man, *fifty* years of age, was accustomed to have a

copious hæmorrhoidal discharge, two or three times a year, but was in other respects healthy. This evacuation being imprudently checked, he began to perceive a wonderful fluttering in his *pulse*, and soon after a tension in his left flank, which ascended towards the breast, and an hæmoptoe presently followed. Notwithstanding various means were tried, the former periodical discharge could never be restored; but the spitting of blood returned frequently with the same symptoms, and at last he died of a phthisis." The above case, which is not a rare one in the annals of medicine, sufficiently evinces the danger of suddenly restraining customary discharges, even in *old* persons: it should therefore be studiously guarded against in that period of *life*, when the lungs are more *naturally* susceptible of disease.

A sudden disappearance of certain eruptions, will next be noticed. What induced me to suppose a cessation of these eruptions, in certain constitutions, to be a cause of phthisis, was the following case, which I was informed of sometime since. A man, about twenty-five years old, of a good constitution, had a number of the above pimples upon his back and shoulders, since his nineteenth year. They would occasionally inflame a little: at which period, they produced a sensation of itching and discharged a watery fluid. From some

cause, which I am ignorant of, they suddenly left him, and in a few days he was taken with a more than usual difficulty of breathing, after any exercise, and a sense of fulness in his breast. In a day or two, he had a discharge of blood from his lungs, for which symptom he was bled twice. In three or four weeks he was again seized with the same symptoms, and immediately had himself bled, which produced the desired effect of preventing the hæmoptysis. I do not know the result of this case, as the man left Philadelphia a short time after. Van Swieten informs us, " that an acrid serum frequently oozes from the heads of children and dries into a crust: sometimes a like kind of disorder spreads over the skin :" he further remarks, " If this excretion be checked, either by accident or design, the most terrible disorders and convulsions are the consequence. Nay the lungs are frequently thence affected, and a phthisis brought on." From these circumstances, I think the cure of eruptions of long standing, should be attempted with more caution than is usual upon such occasions.

A too *sedentary* life is the next cause we will advert to. We are persuaded no physician will be surprised to see this considered as productive of the disease in question, although it be the *reverse* of many of the causes, which have been already mentioned. An abstraction of the *stimulus* of exercise,

together with hard study and sitting up late at night, are some of the most frequent sources of consumption. We are not constrained to peruse *medical books* in search of *solitary* proofs of the above position. For we *see* this in a much more forcible manner, from the large number of young persons of both *sexes* who are yearly destroyed by their influence. A sedentary life, and also the want of that tone which is imparted to the lungs in *singing*, has been given as a reason why the *ladies* of a certain religious denomination are oftener afflicted with this disease than *others*. A cessation of the menses may no doubt occasionally be a cause of consumption: though I do not think it is as frequently the case, as is the opinion of many respectable writers upon this subject. We have the authority of an ancient writer\* for asserting, " that coughs, obstructions, and suppurations of the *lungs*, may arise from a *suppreffion* of the *lochia*.

An immoderate use of tobacco is the last cause that I will consider. When this plant is made use of in the way of *smoking* it is certainly very injurious to persons of weak constitutions, and to those also disposed to consumption from other circumstances. In Dr. Rush's 2d. Vol. he observes, " I have seen a case of consumption in a *youth* of seventeen, from the spitting produced by the intemperate use of segars."

\* *Hippocrates*.

It is still more detrimental to the body when *chewed*; as, from the continued *stimulus*, it exerts upon the mouth and salivary glands, a great quantity of that fluid, so necessary to *digestion* and the subsequent nutrition of the system, is wasted. And indeed, this mode of using it, appears to lessen the powers of the digestive organs, to a greater degree than any other. May we not with propriety add, in a general manner, that those who are much addicted to these injurious practices, are also exposed to many of the other causes of this disease? This remark applies more particularly to the *younger* part of *mankind*. From the united action of hard drinking, and the excessive use of tobacco, what terrible effects upon the system may not be expected?

All the *remote* causes that have been enumerated, induce either direct or indirect *debility* in the *lungs*. This debility, constitutes the *predisposing* cause of phthisis. That a *debility* is produced by their action, we presume no one will now doubt; and if we attentively consider all the histories of consumption, we shall invariably find, that a *debility* was induced in every case, prior to the attack of the disease. From this we easily understand why those who are exposed to the action of many of the remote causes, at the same time, are more certainly attacked with phthisis. That a pulmonary consumption cannot occur without *previous* debility, has been so ably

and clearly demonstrated in another place\* both by *reasoning, analogy and facts*, that I deem it unnecessary to dwell longer upon this subject, but will proceed to consider the *exciting cause*.

The exciting cause, in all cases of phthisis, is stimulus. Any of those *remote causes*, that produce excessive action, may induce this complaint, when the system is in a state of predisposition. Whether it be heat, great exercise, an intemperate life, or any *other cause* that excites phthisis, they all act in the same manner.

I now go on to the consideration of the *proximate cause*. The first I shall notice, and which appears to have met with the approbation of most medical authors, is the one that was broached by *Morton*. The Doctor asserted, that phthisis is occasioned by the absorption of pus, or purulent, acrid matter in the constitution, from abscesses or ulcers in the lungs. This doctrine has been refuted in a learned and satisfactory manner by Dr. *Reid*, in his valuable work on this disease. The opinion of the absorption of *pus*, is declining daily: and when we consider that pus possesses no acrimonious or corrosive property, we cannot be surprised at it. But even admitting its acrimony in consequence of disease, since we possess so many instances of its being

\* *Rush's Works, 1st and 2d Vols.*

in large quantities in the body, without inducing phthisis, we should be obliged to doubt the truth of this theory. Dr. *Reid*, “ In one patient found three pints of pure pus in the pericardium without any ulcer on that membrane or on the heart ; ” and, in another, he found “ the cavity of the pleura, on the right side, distended with pus, the lungs compressed into a very small compass, but no appearance of an ulcer or erosion on these organs, or under the pleura.” In neither of these instances, and in *many* others that might be adduced, does pus appear to possess any acrid property—far from it : and from the various experiments\* that have been made upon this *fluid*, we are confirmed in the opinion, that it is entirely devoid of *any* irritating power. In suppurations of the *liver* and *kidneys*, when nearly their whole substance have been found in a state of *pus*, we do not perceive those phenomena that are attributed to the absorption of matter in phthisis ; but if, in any case, this disease could be produced by absorption of pus, we certainly should see it in those instances, where this fluid has existed for some time in the lungs themselves ? This we do not find to be the case ; for there are innumerable instances, in which pus has been expectorated, for a long period, without any symptoms of consumption. This was the case, to a remarkable degree, in the subsequent history, which I transcribe from *Van Swieten’s commentaries*, of a

\* See *Home on the properties of pus.*

person of distinction, who died upwards of *seventy*. “ I saw him,” says the baron, “ for more than four years previous to his death, spit up, every morning, some ounces of well digested *pus*, with great ease; and, during the rest of the day, he frequently spat out the like matter. He solemnly affirmed he had spit out a like quantity for *thirty years*: and this was confirmed by physicians deserving of credit, who had known him long, and had frequently been consulted by him.” What must further increase the opinion, that phthisis cannot be the consequence of absorbed pus, our *author* informs us, that the subject of the above case “ followed his usual employments, and used a pretty high and plentiful diet.”

The next causes which I shall hint at are *tubercles* and *ulcers* in the lungs. These are supposed, by many writers and physicians, to be frequent sources of this disease; but they appear to be as certainly the effect of previous disease in the lungs, as *schirri* or *abscesses* are, in any part of the animal system. We might, with equal propriety, suppose a *suppuration* of the liver, or a discharge of water into the *ventricles* of the brain, to be the causes of the *hepatic* or the *hydrocephalic* states of fever, as assert, tubercles or *abscesses* in the lungs, to be causes of pulmonary consumption. If we suppose an *ulcer* or *tubercle* to be the causes of phthisis, how are we

to explain the appearance of its phenomena prior to the existence of these supposed causes? For all cases of phthisis are well marked before any ulcer or tubercle can, with propriety, be suspected to be present. And further, the disease is formed, in many cases, for some time before any pus, or even mucus is coughed up.

I come now to offer a few remarks upon the theory of the *ingenious*, and justly celebrated Dr. *Beddoes*; and sorry I am that to it I cannot subscribe. I do not flatter myself with the idea of being able to produce any new or satisfactory objections to this original and simple theory of consumption; but such as they are, they appear in my own mind to be conclusive. Dr. *Beddoes*, from remarking that pregnancy suspended this dreadful disease, and from observing the appearances of phthisical persons, has concluded a *super oxygenation* of the system to be the cause of consumption. Although the Doctor has advanced many arguments in favour of his hypothesis, it appears unsatisfactory from the following considerations.

1st, Pregnancy does not *uniformly* suspend consumption. Dr. *Rush* has communicated to me the following case of a lady, whom he attended some years since, in this disease. After having been afflicted with phthisis for some time, she became

pregnant, and died in the fifth month of her gestation, without any visible abatement of her phthysical symptoms. I do not doubt of their being many such instances, though I am not acquainted with them.

2dly, When a conception of *twins* has taken place, we do not find the symptoms sooner, or to a greater degree relieved, than in cases of common conception; which should be the case agreeably to this theory.

3dly, When pregnancy ensues the symptoms of the disease are not abated in the progressive order, that this theory would lead us to suppose. In other words, their consumptive symptoms are as much relieved at the fifth or sixth month, in some cases, as they are in the eighth or ninth.

4thly, In cases of phthisis, when a dropsy of the *abdomen* has taken place, the oppression and difficulty of respiration are evidently increased. In this instance, "from the impeded action of the diaphragm," those symptoms should lessen, as less oxygine is received at each inspiration.

5thly, Persons with narrow and small breasts are certainly much more liable to this disease than those who possess large and prominent chests. But this

should not be the case, if the Doctor's opinion was just; for surely less *pure* air will be absorbed by the former than the latter.

6thly, As the Doctor was aware of the great difficulty of respiration, in phthisical patients, when in crowded rooms, he answers this objection to his theory, by supposing that their "temperature may counteract the diminished proportion of oxygine:" this, however, appears to be unsatisfactory. Phthisical patients seem to suffer much less from heat, when not using exercise, than persons in health. Although the temperature of a room has certainly some influence in aggravating the respiration of consumptive persons, yet when in situations of the same degree of heat, their breathing is not performed with such difficulty or uneasiness to themselves, as when in crowded apartments, particularly, where many lights are burning. The inhabitants of *cold* countries, suffer little from pulmonary complaints. Is not this an objection to this theory, since it is supposed, that in an equal volume of air, a greater proportion of oxygine exists in *cold*, than *hot* countries? I will not advert to the acknowledged fact, that the disease we are considering, is much more frequent in cities than in the country; though, believing the Doctor wrong when he supposes that *pure* air is in as great a quantity in each situation. As probably the great difference, as to the manner of

living, may explain why the inhabitants of the one suffer more by this complaint. Neither will I bring forward, as an argument against the Doctor's theory, the cases in which oxygine gas has been asserted to be productive of beneficial effects in this disease; for even admitting these facts they do not prove any thing.

I have attempted, in another part of my piece, to collect together the different circumstances of the system that have either suspended or cured this disease, besides conception. It cannot be supposed, that *mania* and the other states of the body there enumerated, act by diminishing oxygine. I do not know of a case, in which, from pregnancy suspending the symptoms of phthisis, they have not recurred after delivery. After considering the nature of the different circumstances that have retarded the progress of consumption, they appear to produce this effect, either by translating the morbid excitement from the lungs to another part of the body, or by inducing, in a part or parts of the body, an action different from, or greater in violence, than the one in ~~the~~ this diseased viscus. I am not ignorant, however, that other states of disease have ensued without much relief to the symptoms of phthisis. In the *medical repository*, vol. I. we find, that in a patient of Dr. *Croswel's*, after the pulmonary complaint had proceeded so far that a regular cough,

hectic, and expectoration of pus, had taken place: she was seized with a regular intermittent, which continued for two or three weeks without any very important abatement to the phthisical symptoms. But we are also informed, that, "after the disappearance of the ague and fever, the consumptive symptoms increased in violence."

After having considered the phenomena, causes and cure of phthisis, I am disposed to conclude, that a *morbid excitement* in the blood-vessels, generally, but especially in those of the lungs, is the proximate cause of this disease. I have neither leisure nor abilities to offer any thing of my own upon this subject; but have adopted the above, since it appears to be the only one calculated to explain the different appearances of consumption.

I will now commence the consideration of the *cure* of consumption. This is the most difficult part of my subject, and, as in other instances, also most desirable.

It is a general observation, that diseases are easier avoided than cured; and this is applicable in a peculiar manner to this disease, which when confirmed, is acknowledged by most physicians to be generally fatal. It may be proper to advert to some of the causes that have led to the above con-

clusion and which can be assigned why it proves so difficult of cure.

Motion certainly aggravates the disease, and increases the difficulty of cure, in an inflamed part. This cause operates in the most striking manner in the present disease. Independent of the motion of the lungs, which cannot be avoided, when they are diseased, this is evidently increased, and they suffer also from violent fits of coughing, which quickens the respiration and also the determination of blood towards them. The continued motion of the lungs has been considered by all writers as a cause that retards the cure, and increases the diseases of this viscus. Upon this subject, Mr. *John Hunter* "thinks it a great pity that we do not accustom ourselves to move one side of our thorax independent of the other, as we from habit move one eyelid independent of the other." Hence, if we could prevent the cough, and constantly keep the respiration nearly natural, in phthisical patients, it is more than conjecture, that this disease would be nearly in the same state, and admit of a cure as *certainly*, and also as *readily*, as any internal part, in the same inflamed situation.

To the above, we may add another cause; which, since it rests with the patients themselves, and as its imprudence has been shewn by every writer upon

this disease, it is not a little surprising that it still continues. I mean that neglect of applying for *medical* aid, which is so universal in this disease, until but a small prospect of success remains from the employment of any method of cure. Persons having symptoms of an incipient disease of the breast, appear ashamed of confessing it to their friends; and when it cannot be avoided longer, and they do seek a physician, they still endeavour all in their power to convince him, their disease is any other than phthisis. We sometimes see these patients unfortunately gain their point at the expense of their lives. This is not solely confined to the commencement of the disease. Dr. Rush says "I have never met with but one man; who, upon his being asked, what was the matter with him, answered unequivocally that he was in a consumption." Dr. Fothergill observes, "We cannot, I think, be too industrious in propagating, that the time at which a physician can be of the most use, in the cure of consumption, is at the first beginning;" and he further observes, that, "the slightest catarrhal defluxion, ought not to be neglected, if it does not go off in a few days." Every one will agree to the propriety of these observations. Is it not then a great misfortune, that neither of the truths they contain are often attended to? This seems to have ever been the case, since all writers upon this disease complain they are not applied to

in time. We should, therefore, not attribute the great fatality of phthisis to its being incurable: for the difficulty of cure of *every* form of disease, is increased or diminished in proportion to the time it has continued previous to the application of its remedies. Some of the most trifling diseases have, from neglect, often terminated in death. This being the case, we cannot be surprised to see consumption so frequently rendered incurable by negligence; as it is a disease ever attended with great danger.

I will now proceed to the consideration of the remedies, after the formation of phthisis: and first of blood-letting.

Almost all authors recommend this remedy, to a certain degree, in this disease; but it appears seldom to have been used sufficiently, as from the very epithet, which is applied to this form of disease, it has been supposed to require but little depletion, and hence in most writers we are desired to draw blood in *small* quantities, and to repeat it at certain intervals. This practice, I firmly believe, is the reason that many physicians are discouraged, and thus attribute their ill-success to the remedy they had so *sparingly* employed. At the first appearance of phthisis, this “noble remedy,” should be used with great freedom, though directed with judgment. To what can we attribute the universal

success of practitioners in *pleurify*, but to their liberal employment of the lancet? In this disease is often drawn as much blood in a few days, as a phthisical patient loses in many months. This practice appears to be directed rather by the "name of the disease than the state of the system," as I have repeatedly seen patients in phthisis, whose symptoms called as loudly for its use as pleurify often does.

I would not wish it concluded from this, that I should draw as much blood, in the same space of time, from a person afflicted with consumption, as from a pleuritic patient. This would not be necessary, as one or two large blood-lettings, together with the use of other remedies, would probably stop its progress and prevent *tubercles* or *ulcers* taking place. It is a subject of much regret, that physicians are seldom consulted until the above appearances are formed. But even when *ulcers* have been formed, blood-letting may be used with much advantage to a greater extent than is usually the case. It is not solely from the good effects I have seen follow this remedy, that I suppose larger quantities are proper than are in most cases taken; but Dr. *Mead* observes, "If the lungs be *ulcerated* and the fever runs high, it will be proper to take away as much blood as the patient can bear, at proper intervals." In the Edinburgh medical essays, vol. iv.

this remedy is spoken of in high terms, by an *anonymous* writer, after *ulcers* have taken place. He says, “ as blood-letting takes off or considerably abates the violence of the hectic fever, it may, in fact, be of no real expense at all ; since by this means, it prevents the great loss of fluids by the colliquative sweats and diarrhea.” In this state of phthisis, this remedy prevents the sound parts being affected with inflammation, and thus, as it were, confines the disease to a small part of the lungs. It retards the formation of pus, and causes the matter to be expectorated, with greater ease ; and also lessens the violence and frequency of the cough. Thus the patient is less harrassed by this distressing symptom, and the ulcerated part of the lungs is less irritated than it would be, from much coughing and a difficult expectoration. I saw these effects follow the loss of *six* ounces of blood, in an Irish gentleman, a few weeks before his death. I was particular in my inquiries, and found he had expectorated with less difficulty than usual ; and that no pain had succeeded his exertions in coughing, which had hitherto been the case. He also slept more the ensuing night, and found himself in the morning refreshed to a greater degree than he had been for some time.

We are to be guided with respect to the quantity of blood to be drawn and its repetition, by the *symp-*

tems, pulse, and the appearance of the blood. Relief succeeding this remedy is certainly a sure indication of the propriety of its use. But this not immediately taking place, should never deter us from its renewed application in this disease. It does not in other diseases, nor with other remedies, and neither should it in this. Blood-letting is often repeated in other states of disease, when if physicians had been regulated in its use, solely from its *apparent* beneficial effects, its further use would have been considered injurious. We do not in the *scarlatina*, or *intermitting* fever lay aside the exhibition of *emetics* and the *bark*, because one or two doses do not cure these diseases: and experience confirms the opinion that venesection in phthisis is not to be deserted merely from its use not being attended with immediate good effects. I have often witnessed the symptoms of this disease abating after the second or third blood-letting, when they appeared to be rather increased by the first use of this remedy. The constitution of the patient should have some influence in judging of the propriety of this remedy; though we would not be directed by this consideration alone. The following symptoms seem to indicate its necessity: much pain; or a sensation of heat or fulness in the chest; a hard, slow, much increased, or irregular pulse; and blood appearing in the expectoration. To which may be added, very difficult breathing, at the commencement of the disease.

Blood drawn in this disease seldom exhibits any size, but usually a more inflammatory appearance. That blood destitute of this fizy or buffy coat, as it is termed, is an indication of a greater inflammatory diathesis than when present, has been satisfactory shewed in a late valuable publication.\* Daily observation proves, that this appearance of the blood does not take place till towards the close of acute diseases, after their violence have been reduced by depleting remedies. A want of *siziness* is not unfrequent even in the close of consumption.

It was formerly observed, that the menses sometimes continued regular during the greater part of this disease. When this is the case, or should in any period of the disease a discharge of blood from the nose or any other parts take place, blood-letting is necessary; and no efforts should be made to stop these discharges unless profuse. *Bennet*, who had the best experience in this disease, being both patient and physician, remarks, that "all consumptive persons who have frequent moderate bleedings at the *nose* hold out the longer for this discharge." This remark of our *author* is strictly true, and most persons who have had much practice in this disease, have made the same observation. Dr. *Rush* has seen "two cases of inflammatory consumption, attended by an *hæmorrhage* of a *quart* of blood from the

\* Rush's 4th Vol.

lungs ; they both recovered to the great joy and surprise of all connected with them.”

When we see phthisical cases thus unusually protracted or cured by accidental discharges of blood, is it not more than theoretical to expect greater advantages must ensue from the timely and judicious employment of this remedy? Surely we should not wait for a natural effusion of blood, depending upon various circumstances, but procure this discharge when there are most prospects of relief, and no danger to the patient? From this we will possess two advantages, that are absolutely necessary to ensure the most beneficial consequences from phlebotomy. I mean a proper time and the proper quantity. We never see a natural discharge of blood take place, at the time we would expect the most salutary effects ; and likewise neither too great or too small in quantity. It may possibly be thought a rash practice, says Dr. *Mead*, to draw blood, even when the patient is much wasted in his flesh, and very weak ; but this great physician observes, that “a temporary lessening of the strength is of service when attended with a part of the cause, which would weaken the body more and more every day.” The Doctor adds, “ I have seen cases judged almost desperate, where this method of practice succeeded well.”

I knew the case of a lady, among many of a similar nature, whose disease was protracted for years by the judicious use of bleeding, by my worthy *preceptor*; and I have every reason to conclude she would have perfectly recovered if he had been consulted in time.

When in females conception suspends phthisis, may not the use of this remedy be attended with great prospects of success in preventing its recurrence? While upon this subject I will digress and observe, that it appears to be a bad practice to *discontinue* the use of remedies in this disease, when suspended by pregnancy. Does not this interval afford the best opportunity for the application of our remedies? Before quitting the subject of blood-letting, as a remedy in the cure of phthisis, I would add, that it has been given as an argument against its use, that all consumptive patients are so reduced as but little blood remains in the body. That this is not the case, appears by the following from *Morgagni*. “It must not be passed over in silence, that in a consumptive woman, in whom, by reason of the very emaciated state of her whole body, the skin seemed scarcely to adhere to her very thin bones, the lungs when cut into, poured out a large quantity of blood mixed with sputum:” I must also add, that in two other patients (one of whom had expectorated pus) both of them had a great quan-

ity in their ulcerated and putrid lungs, notwithstanding they had discharged a vast quantity of blood from their mouths and nostrils ; and the second of them, moreover, from all parts by which hæmorrhages happen, and that the carcase of the second, nevertheless, shewed in the left kidney a great stagnation of blood, and in the *lumbar* region, had the sanguiferous vessels very tumid and inflamed ; and that the blood-vessels of the first were very turgid with blood, in the *omentum, stomach, and mesentery.*”

I will next say a few words upon purgatives. This class of medicines appears to have been too much neglected, in the treatment of consumption. The great objection, that has been considered as valid against their employment, seems to be, that a purging occurs in the last stage of the disease, and often hastens its fatal termination. This however should have no weight ; for, in the beginning of the malady, the patient is costive, which symptom we know has a tendency to increase his complaint. Moreover, since we uniformly perceive such immediate good effects to follow a diarrhea, though occurring when phthisis is far advanced, we must expect much greater in an earlier period. In most diseases the state of the alimentary canal has much influence upon the respiration of the patient ; but in *this*, it produces remarkable effects ; and we find this symptom to be hurried or relieved according to

the state of the bowels. Some of those medicines, that have been considered as specifics in phthisis, appear to have produced their good effects by inducing a relaxed state of the intestines. *Bennet* speaks favourably of gentle laxatives, in the beginning of the disease, and appears to have experienced advantages from them. The body, in the incipient stage, or previously to consumption progressing much, should always be kept open ; but I think medicines of the more stimulating class of purgatives are to be preferred for this purpose.

Much has been written to shew the great advantages that are derived from *emetics* by Doctors *Reid*, *Simmons* and others, in the cure of consumption. But, as from the general operation of these medicines, they seem to act very powerfully upon the lungs, inducing a great determination of blood to them, so that a spitting of blood might be apprehended, or at least a recurrence of this symptom, if the patient had been afflicted with it, their employment seems very doubtful ; at least in the beginning of the complaint they must prove injurious. After the formation of large abscesses, the use of gentle vomits may be attended with temporary relief to the patient's sufferings ; and when so large a quantity of matter exists in the lungs, that a suffocation is threatened, they are certainly to be employed, The continued use of these medicines for

months, and repeated daily, have, in the hands of some respectable physicians, been followed by success. Dr. *Marryat*, in his *New practice of physic*, speaks much in praise of, and prescribes with freedom, what are called *dry vomits*, from their operation not being promoted by drinking, as is usually the case. The emetic, Dr. *Marryat* used, consisted of the *sulphate of copper* and tart. emetic. I do not know however if any peculiar good effects have been ascertained by practitioners from this mode of administering vomits in phthisis. I will conclude the subject of emetics by observing, that, in the first stage of phthisis, they are detrimental, and in an advanced they can be only *palliatives*; but as such, are never to be disregarded.

Sweating medicines have been employed, to a small degree, and with some persons are said to have proved of service in this disease. We seldom see patients at that stage of phthisis, in which *sudorifics* would be of most advantage, and even then the *milder* substances of this class are preferable.

Too much cannot be said of the beneficial effects of *blisters*, as a remedy in phthisis. They have been recommended by nearly all writers upon this disease, and their repeated application is advised. A continued *blister* upon the breast has, in numberless instances, been evidently of great benefit to

persons advanced in phthisis. Blisters however have, in most cases, been reserved to the latter periods of phthisis; but this appears to be an improper practice; if any *permanent* advantages are to be expected from their application, they should be employed as soon as possible: for can their use ever effect a *cure* when large abscesses are already formed in the lungs? I think great benefit would arise from the perpetual *irritation* of a blister upon the system, in an early stage of phthisis. I am sensible that the fear of increasing the inflammatory diathesis, will be the only objection that can be advanced, with any appearance of plausibility, against this mode of employing blisters in this malady. But even should this often be the case, since we have in our possession the means of reducing it, at pleasure, by depleting remedies, and when we will eventually derive such benefit by their employment, in this stage of consumption, it is assuredly justifiable to risque this *transitory* evil. The way to obtain the best effects of blisters, in phthisis, appears to be by alternately applying them to different parts of the body. Thus: as soon as a blister upon one part appears to have lost its power, it should be suffered to heal, but another be applied to a different place. By this, those parts that have been previously irritated, will in a short space of time, recover their usual excitability, and again will produce the former good effects when blisters are *renewed*. I am

sure, more advantages will follow the above method than can be expected from a *perpetual* blister upon any *one* part or parts of the system. These *stimulating* applications seem to produce their effects, in consumption, only by inducing a great degree of excitement upon the surface of the body. In most diseases, when *blisters* induce a *strangury*, they are productive of greater advantages, than when this effect does not follow their application: and indeed, in some diseases, *cantharides* have been exhibited, internally, successfully with this intention. I am not able to say with any degree of certainty whether in consumption the same effect has been observed, when such an occurrence takes place.

With respect to *setons* and *issues*, which have been much extolled by certain writers, I have but little to say. I have seldom seen them used and never with any lasting or remarkable effects.

*Opium* has been but sparingly used in the first periods of consumption; and this practice appears perfectly just. As the operation of this medicine seems now to be well understood, we could not but expect deleterious results from the early use of such a powerful stimulant. In the latter part of this disease, however, when the patient is afflicted with an incessant cough, diarrhea, and other distressing symptoms, this medicine should be resorted to, since it often

contributes to alleviate the agonies of death, and affords the unhappy sufferer an interval of ease.

The *bark* has been administered by many physicians in consumption. From this medicine producing such wonderful effects in *intermitting fevers*, practitioners were led to expect the same advantages in the cure of the hectic; and hence the bark has been tried in every period of this disease, to a very great extent. *Desault*, many years ago, asserted, that this remedy did harm in diseases of the lungs. Dr. *Fothergill* has known the bark often produce hæmoptysis and other dangerous symptoms, when administered early in the disease, and “In the subsequent stages, often indeed with less appearance of injury, but at least without benefit.” *Torti* found the use of this medicine to be often attended with a manifest abatement of the usual paroxysms of fever, but this effect soon ceased, and the complaint pursued its natural course. Dr. *Mead*, treating of the efficacy of the bark in *fevers*, observes, that, “it is pernicious also in those heccics, which are accompanied with ulcers of any of the *internal parts*.” From the testimony of respectable writers, upon the use of the bark in phthisis, and from our own observation, we may conclude, that its employment is certainly injurious in the earlier, and of no real benefit in the latter periods of the disease.

From the *elixir* of *vitriol* having performed a cure, in a certain case of consumption, when an undue dose was taken by mistake, this medicine much excited the attention of physicians. But notwithstanding its administration has been, in many cases, conducted with care, yet it has never realized the expectations that were formed of its powers in phthisis.

*Balsamic* medicines have been much employed in all cases of diseases of the breast. I do not know any thing of their effects in cases of consumption, having but seldom seen them used in this disease. As, in general, the articles of this class are evidently stimulants, and from the observations on this subject by many experienced persons, I am satisfied, their employment must be improper in nearly all cases. Dr. Fothergill, who has left us an excellent paper upon the use of *balsams*, in consumption, after asserting, that the *momentum* of the blood towards the lungs is increased during its whole duration, observes, "and as the medicines above mentioned, have a tendency, some more some less, according to the different degrees of activity, to increase this *momentum*, ought we not to be extremely diffident in applying them in such cases, by *whatever* authority they are mentioned?"

In the London medical transactions, vol. 3, Dr.

*Darwin* relates the case of a young man, who was cured of this disease by the use of the *digitalis purpurea*. This patient took one large spoonful of the *decoction* twice a day, without the employment of any other medicine, and continued this for the space of six weeks.

It appears by an ingenious and valuable essay\* that the *rhus radicans* has been employed in several cases of this disease. In one person who had been afflicted with consumption for two years, a strong *decoction* of its leaves much abated his pulmonary symptoms. In the case of an aged woman, in whom small doses of the *extract* evidently relieved her complaint, it produced this effect, in the opinion of the patient, by keeping her bowels open. And in a young man, in whom this medicine relieved the pain in his breast, it “produced an *eruption* on the skin, a slight *salivation*, and opened the bowels.”

In those cases of phthisis, attended with a discharge of blood from the lungs, the exhibition of cooling laxatives, together with the use of *common salt*, and *nitre*, have, in many cases, contributed in protracting the fatal termination of the disease.

\* An inaugural dissertation on the *rhus vernix*, &c. &c. By *Thomas Horsfield*.

I must not quit this part of my subject without observing, that the employment of *mercury* so as to produce a *salivation*, has been recommended as a remedy for phthisis; and its use has in some cases produced salutary effects. “I have found it difficult to produce a salivation in this disease. In one case it was succeeded with complete success: but I am in doubt whether to attribute this cure to the mercury or to six *bleedings* which were also employed.”\* I will quit this head by observing, that it seems improbable to expect success from this remedy, if employed, in the latter stages of consumption.

Upon the subject of *pneumatic* medicine, in this disease, I cannot say much. Many physicians have employed a diminished proportion of *pure* air, and have experienced various results. Dr. *Beddoes*, in his publication informs us, that he has obtained very great advantages, in a large number of cases, by making his patients respire an atmosphere in which the *oxygenous* part was lessened: and we must also add, that the Doctor to prove his theory of consumption, with much intrepidity endeavoured to induce upon himself this disease by breathing an *undue* quantity of pure air, which was attended with success. Dr. *Girtanner*’s † trials prove, that the car-

\* *Rush’s Lectures.*

† *Vol. I. Medical repository.*

bonic acid gas is of great service in some cases, useless in some, and sometimes hurtful. Dr. *Percival* has administered *fixed air* to more than *thirty* patients in *phthisis*. He has seen cases in which the hectic was abated, but its use has not, in one instance, effected a cure “although the use of *Nephritic air* was accompanied with proper internal remedies.” But Dr. *Whethering* appears to have been more successful in his trials. Dr. *Rush* in his lectures informed us, that from the authority of a respectable physician,\* lately from England, who had repeatedly seen *phlogisticated air* administered, in consumption, its employment was without success; for though it always relieved for a time, its salutary effects never continued long. It may be considered improper to omit mentioning that an *undue* quantity of *oxygine* has, in many instances of *phthisis*, produced very salutary effects. *Chaptal* relates a striking case in proof of this, in a *gentleman* far advanced in the complaint.

An increased quantity of *pure air*, appears to be only applicable to the latter, and a *diminished* proportion to the incipient periods of consumption. Hence we may perhaps account for the contradictory success of *pneumatic medicine*. I will add, that, in one case, I attempted the use of *oxygenous gas* in a *phthisical* patient, whose disease was much

\* Dr. *Jardine*

advanced. In this person the action of the lungs was so far impaired, that he could respire but a small quantity of the air, yet his respiration, and other symptoms, were evidently relieved for one or two hours. These appearances however I cannot attribute to the agency of the *air*, since his expectorations were much excited, and his spirits increased from prospects of success by its employment.

As, somewhat connected with this part of our subject, I will just observe, that Dr. Pearson, of Birmingham, England, has administered the *vapour* of *vitriolic æther*, with great success, in consumption. The Doctor says, “ the *first effects* of this application, are an agreeable sensation of coolness in the chest, an abatement of the dyspnœa and cough, and after ten minutes or a quarter of an hour, easier expectoration :” and that the “ *ultimate effects* are, a removal of the local inflammation, a cleansing and healing of the ulcerated lungs, and a suppression of the hectic fever.”\*

A remedy recommended by some, as a *specific* in consumption, is the earth bath. Van Swieten, in his commentaries on *Boerhaave*, tells us, that in some parts of *Spain*, they have a method of curing phthisis, by the use of this remedy ; and he quotes *Solano De Luque*, celebrated for his book

\* *Medical repository.*

upon the *pulse*, in confirmation of this practice. *Solano* speaks of the *banos de tierra*, or earth baths, as a very old and common remedy in *Granada* and some parts of *Andalusia*, in cases of consumption; and relates several instances of their good effects in his own practice. Dr. *Fouquet*, an ingenious French physician, has tried this remedy in two cases. In one, a confirmed phthisis, he was unsuccessful; but the remedy had not a fair trial. In the second case, he was more fortunate: the patient, a girl of eleven years old, was entirely restored. A physician at *Warsaw* has likewise prescribed the earth bath with good success in cases of hectic fever. This remedy was of late extensively employed in England by a celebrated empiric, in consumptive cases. In most instances it produced a very great sensation of cold to the patient, "and we have not heard of any phthisical cases in which good effects were decidedly obtained from it."\*

I will now consider the different modes of using *exercise* in this disease. It is usual, upon this occasion, to produce the opinion of the great *Sydenham*, who asserted, that riding on *horseback* was as certain a cure for consumption as the *bark* for intermitting fever. This I believe; but as there is a certain time when the bark would do harm in the fever, so also is there a period when riding would as cer-

\* *The American Encyclopædia.*

tainly prove injurious to the phthisical patient. Most writers advise the employment of this exercise in the disease we are considering ; but it is proper to be regulated in its use by the condition of the system, as much so, as in prescribing any other remedy. In many persons this exercise has proved beneficial in one period, and detrimental in another stage of the disease. When in the after part of the day the pulse becomes more frequent, accompanied with heat and other feverish symptoms, this exercise would certainly increase the disease. As riding on horseback agitates the *vicera* and determines the circulation towards the lungs more than riding in a carriage or walking, either of the latter would in many cases be preferable to begin with.

The exercise and fatigue of a *camp* life has in many instances proved a cure to this disease.

*Sailing* has been strongly recommended in consumption ; and Dr. *Gilchrist* has repeatedly experienced the most *extraordinary* advantages from this remedy in cases of phthisis. That the good effects of sailing are produced by the *change* of air, the *motion*, and the *vomiting* have been *each* embraced, as opinions, by different authors. Perhaps we may with more propriety conclude that all these circumstances are concerned, in the production of the advantages, that have followed long *sea voyages*.

Another mode of using exercise has lately been highly extolled in this disease, by Dr. James *Charmichael Smith*, in his account of the effects of *swinging*, employed as a remedy in the pulmonary consumption and hectic fever. Dr. Smith refers the salutary effects of sea voyages entirely to the peculiar motion which is connected with sailing. By *motion* Dr. Smith means such action as is not necessarily accompanied with any agitation of the body, and which is totally independent of *muscular exertion*; upon these grounds he was induced to believe that the *motion* produced in *swinging* would prove at least as beneficial in phthisical cases as *sailing*. This opinion the Doctor says, experience has verified, and success has followed its use in many instances.

I shall conclude this part of my dissertation with a few general remarks upon the diet and regulation, necessary for consumptive patients. It appears to be admitted, on all sides, that a low diet is best calculated to contribute in the cure of this disease.\*

\* We may remark, that the diet of persons in consumption does not seem to be as strictly attended to as it deserves, or appears to have been by physicians of former times. The old writers in most cases depended *more* upon the proper regulation of the patient, relative to this, than any thing else. *Diocles* directed his patients to refrain from *animal* food, and even says, that nothing is of any consequence without *abstinence*. We may add also of this physician, that he likewise directed sweats, since they necessarily *took away strength*.

A vegetable diet seems to be necessary in the incipient stage of phthisis, though a little animal food may be allowed to some patients in this period of the disease. A certain proportion of *salt meat* has advantageously constituted a part of the animal food of many persons in an advanced stage of consumption.

Milk has long been considered as peculiarly adapted to this disease; though we may observe it has often increased the malady from patients imagining that while living upon this article of diet it was impossible to go to an excess in its use. In most patients a diet of milk and vegetables seem to lessen sufficiently the inflammatory diathesis, and its long continued use, together with a temperate life and other remedies, have in numerous cases been followed by complete success. The milk obtained from most animals may be employed, but that of the *non-ruminants* is supposed to be best suited to cases of phthisis. The use of *whey* has often produced those advantages that are derived from a milk diet to a greater degree, and its employment has frequently been successful.

Since most ripe fruits are cooling and prove laxative, their use should be encouraged, as they appear well fitted to cases of this disease. Dr. Hoffman has the case of a youth, who, after being far advanced in

this disease, was cured by eating a large quantity of *garden strawberries*. Dr. *Moore*\* relates two cases of patients in phthisis, that appeared to be cured by living, for some time, almost entirely upon ripe *grapes*; and Dr. *Rush* in his lectures says, he has also seen one cure, by the use of this fruit. *Tulpius* relates the case of a woman, in an emaciated and low state of consumption, who was cured by a diet of *raw oysters* which she eat greedily. It is supposed, and with much probability, that in the many cases of this disease related as cured by grapes and other particular substances, the patients were not afflicted with true phthisis.†

*Sugar*, as a part of the diet of persons in this malady, particularly in the incipient period, has been advised by some physicians: and this substance does not appear to be improper, at any time, unless the diarrhea be present.

*Mucilage*, from its affording nourishment without heating the system, has been recommended with great propriety as the diet of phthisical patients.

With respect to spirituous liquors, it is only necessary to observe, that they should never be used;

\* A view of society and manners in Italy, by John Moore, M. D. Vol. I.

† *Barton's Lectures*.

cooling acidulous drinks or pure water being only proper in phthisis.

Persons in consumption, should be particular in keeping regular hours, avoiding the night air, and exercise before they have breakfasted, and if possible, spending the winter season in cold climates. Their drefs must be warmer than the season may seem to require, and flannel is proper to be always worn next to the body both in *winter* and *summer*.

After having collected together, in as concise a manner as possible, what appears to be most important in the *history, causes and cure* of phthisis, before closing my dissertation, I will add also a few words relative to its prevention.

Since persons disposed to this disease by a certain form of the body, and those whose *ancestors* have been afflicted with it, are most usually its subjects: the following observations will, in a more particular manner, allude to them. Persons *thus* circumstanced, should be careful to avoid all the causes that have been considered as having a tendency to increase or create a predisposition to pulmonic affections.

When too great a determination of blood to the breast is observed, or any symptoms of an hæmop-

tyfis take place, which in those predisposed to phthisis, often occurs as early as the sixteenth year, such persons should be considered as being very dangerously situated, and these first symptoms of a predisposition to phthisis are never to be disregarded. In the above cases, occasional bleeding, moderate diet, and exercise, a temperate life, and the proper use of the cold bath, will prevent the disease.

At the beginning of summer, many young persons are subject to a bleeding at the nose. We should be careful of stopping this discharge in every case, but more so in those disposed to the disease in question. I will now state a case from *Bennet*. “A youth, who had received a consumptive habit from his parents, and who nevertheless enjoyed almost uninterrupted health from his sixteenth to his twenty-fifth year, by means of a bleeding at the nose. For, towards the end of spring, and almost through the whole summer, *once or twice a day*, he bled from the nose an *ounce* or sometimes *two ounces* of blood; at twenty-five this haemorrhage stopped, on his taking cold in his head: soon after his breast began to be overcharged, and a haemoptoe, and other symptoms of phthisis followed; the lancet was used but with little success: but a *copious* haemorrhage returning, the breast grew firm and he escaped so great danger without any other considerable alteration in his health.” This fact is valuable in

two respects; it first shews that although a periodical discharge, in persons predisposed to phthisis, be rather great and also frequent, yet much caution is necessary in restraining it, and also teaches us that when an hæmorrhage does not return and dangerous symptoms follow, that together with bleeding and other remedies, we should draw blood artificially from the part, if this be practicable.

I cannot refrain from making one remark upon *Bennet's* case. Since we are informed that a *copious* flow of blood from the nose relieved the youth after he had ineffectually used the lancet, it only *proves* it had been too sparingly employed.

Perhaps it may be said that I am too *sanguine* upon the advantages of blood-letting, either natural or artificial, in preventing phthisis. But to shew the great efficacy of this remedy in preventing the disease, I shall make use of the following case, in which the disposition to a consumption was very great; and we may add, the *author\** from whom it is taken cannot be accused of being very partial to this remedy in phthisis. "A robust, healthy man married a beautiful young lady, in whose family this disease was hereditary. Of this marriage were born *four* children, three of whom died of

\* Van Swieten.

true phthisis: the fourth and last, terrified by the fate of the rest, prevented, by frequent and copious bleeding, the hæmoptoe. He died about forty of a dropsey. This man had several children, none of whom were afflicted with any disorder of the lungs, through a course of years more numerous than those of their fathers; and happy in a healthy offspring, of whom some are grown up to manhood, perfectly well."

If, in the one case, a periodical discharge of blood, and in the other, a long *continued* use of *venesection*, produced such great effects in persons liable to consumption, in that manner which all physicians suppose to be the most difficult of prevention, may we not positively look for greater when properly employed?

Blood drawn from the hæmorrhoidal vessels is of benefit in preventing any fatal consequences from a cessation of the *bleeding piles*; and from its salutary effect in the ensuing case, I should be induced to use this remedy in a similar situation. *Duretus* informs us, that when past *fifty* he was troubled with a frequent and copious discharge of blood from the lungs, in consequence of a hæmorrhage from his nose, to which he was subject, being *suppressed*, but was perfectly recovered by the application of *leeches* to the *hæmorrhoidal* vessels.

Those who are so unfortunate as to be predisposed to consumption from any cause whatever, should ever bear in mind, that when once induced, this malady

“ — every moment grows,  
And gains new strength and vigour as it goes.”

I will close these remarks respecting the prevention of phthisis, with the following quotation from *Melmont's Cicero* on old age: “ To this end we should be regularly attentive to the article of health; use moderate exercise, and neither eat nor drink more than is necessary for repairing our strength, without oppressing the organs of digestion.”

Having now concluded my observations upon consumption, I wish *each* professor of this university, to accept of my acknowledgments, for the great opportunities of improvement, I have had in their respective branches. I wish, however, to return my thanks in a particular manner to Dr. Barton, professor of the *materia medica* and botany, for the attention and politeness I have received from him.

I beg, also, Dr. Charles Caldwell to receive my thanks, for the advice he has given me in many parts of my medical pursuits; having resided in the same house during the greater part of that period.





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